^{68}Zn(α,p) 1980Ro09

History

Type	Author	Citation	Literature Cutoff Date
Full Evaluation	Balraj Singh and Jun Chen	NDS 188,1 (2023)	17-Jan-2023

Includes (α,pγ).

1980Ro09: E=26 MeV α beam from the Orsay MP tandem. Targets were 60 μg/cm^2 ≥97% enriched metallic ^{68}Zn on thin carbon backings. Reaction products were momentum-analyzed with a split-pole magnetic spectrometer (FWHM=12 keV). Measured $\sigma(\theta)$. Deduced levels, J, π, spectroscopic factors from DWBA analysis.

Others:

1974Iv03: (α,pγ) E=13 MeV. Measured lifetime of 1107.8 level by DSAM.

1970Bu23: E=16.4, 19.4 MeV. Levels reported at 0, 470, 1120, 1510 and 2540 with an uncertainty of 30-90 keV.

All data are from 1980Ro09 unless otherwise stated. Differential cross sections from this work at 13° in arbitrary units are listed in comments.

^{71}Ga Levels

E(level)[†]	J$^\pi$[†]	T$_{1/2}$	Spectroscopic strength[‡]	Comments
0	3/2$^-$		1.95	dσ/dΩ=2.9.
390	1/2$^-$		0.22	dσ/dΩ=0.35.
487	5/2$^-$		2.7	dσ/dΩ=1.15.
511	3/2$^-$		(0.08)	dσ/dΩ=0.11.
1107.8 *10*	7/2$^-$	>0.21 ps		E(level),T$_{1/2}$: from 1974Iv03. Lifetime measured from Doppler shift of 620γ.
1109	1/2$^-$		1.05	dσ/dΩ=1.5.
1476	5/2$^-$		0.86	dσ/dΩ=0.31.
1494	9/2$^+$		3.3	dσ/dΩ=1.7.
1720	(5/2)$^-$		1.4	dσ/dΩ=0.5.
2540?				E(level): from 1970Bu23 only.

[†] 1980Ro09 quote values from 1970Zo01 (β^- decay), the evaluators take J^π values and rounded energy values from the Adopted Levels.

[‡] Proton spectroscopic strength derived using the spectator model; for definition see 1980Ro09; normalized to the mean value of 1.95 measured in the (^{3}He,d) for the ground state.